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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Yuji IGATA, Satoshi HASAKO, et al.  
Serial No. : Not assigned  
Filed : December 10, 2001  
For : **A P P L I A N C E     I N F O R M A T I O N  
T R A N S M I T T I N G / R E C E I V I N G   M E T H O D   A N D  
A P P L I A N C E     I N F O R M A T I O N  
T R A N S M I T T I N G / R E C E I V I N G   S Y S T E M**  
Examiner : Not assigned  
Art Unit : Not assigned  
Docket No. : M2047-33

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Date : *March 15, 2002*  
By : *11190 Hildreth*  
Signature : *Yoga Hildreth*

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Hon. Commissioner for Patents  
Washington, D.C. 20231

**INFORMATION DISCLOSURE STATEMENT**

SIR:

In accordance with 37 C.F.R. §1.56, applicants wish to call the attention of the Examiner to the information identified in the attached form PTO-1449. A copy of the prior art references are enclosed.

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The concise explanation of relevance of the non-English language references is found in the partial translations (including abstracts) of each of the Japanese language references. See MPEP §609 A(3).

Concerning Publication No. 08-292986, Application No. 07-098699 for METHOD AND SYSTEM FOR ASSISTING CUSTOMER SUPPORT, Applicants respectfully note that they have provided a computer translation of the abstract and a substantial portion of the entire application, without translation of the drawings. Both the Japanese version, with drawings, and the translation are provided herein for review.

Applicants respectfully note that, in this reference, a user terminal sends internal state information to a customer support center but the customer support center doesn't send information corresponding to internal state information received to the user terminal.

Concerning Publication No. 2000-333218, Application No. 11-139406, for FAULT DIAGNOSTIC DEVICE, Applicants respectfully note that they have provided a computer translation of the abstract and a substantial portion of the entire application, without translation of the drawings. Both the Japanese version, with drawings, and the translation are provided herein for review.

Applicants respectfully note that, in this reference, information which is sent to a maintenance center is restricted to fault information of an image circuit and an access button is not disposed on the device.

Applicants respectfully request that the Examiner consider the enclosed prior art reference materials in the examination of this application.

No fees are deemed necessary for the submission of this Information Disclosure Statement, as it is being filed before a first office action in this

Patent

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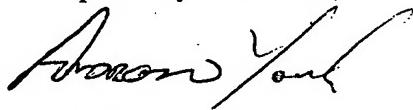
M2047-33.IDS

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Application. However, if any fees are necessary in connection with the filing of this Information Disclosure Statement, please debit our Deposit Account No. 13-4550.

The citation of this information does not constitute a waiver or admission of priority or that any cited item is available as a reference, or a waiver of any right under applicable statutes, codes, rules, or otherwise.

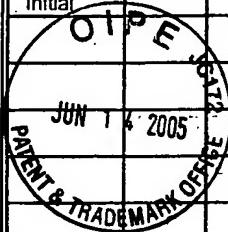
Respectfully Submitted,



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Registration No. 44,001  
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Date: January 8, 2002

Form PTO-1449 (Rev. 7-80) 42-44F (F-49)		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. M2047-33	Serial No. Unknown								
<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary)		Applicant <b>IGATA, et al.</b>											
		Filing Date Dec. 10, 2001	Group unassigned										
U.S. PATENT DOCUMENTS													
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate						
													
FOREIGN PATENT DOCUMENTS													
		Document Number	Date	Country	Class	Subclass	Translation						
							Yes	No					
0	8	2	9	2	9	8	6	11/96	JAPAN	NA	NA	Partial	
2000		3	3	3	2	1	8	11/00	JAPAN	NA	NA	Partial	
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)													
		A											
		B											
EXAMINER					DATE CONSIDERED								
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.													

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-333218  
 (43)Date of publication of application : 30.11.2000

(51)Int.CI.

H04N 17/04  
G09G 1/00

(21)Application number : 11-139406  
 (22)Date of filing : 20.05.1999

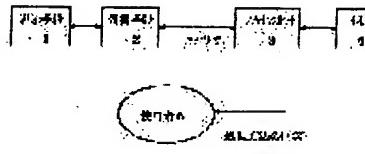
(71)Applicant : NEC HOME ELECTRONICS LTD  
 (72)Inventor : TAKAHASHI KUNIYOSHI

## (54) FAULT DIAGNOSTIC DEVICE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a fault diagnostic device that detects a fault of an input signal or a fault of a device and informs a maintenance company about the fault to troubleshoot the fault.

**SOLUTION:** This fault diagnostic device detects a voltage of an input signal and of a control signal of each circuit of a display means 1 and an input power supply and a control means 2 that applies quality discrimination to the detected control signal and stores a history storing past fault contents is connected to a maintenance center 3 via a network when the display means is failed to receive immediate contact from the center 3 about a disposition method of a defective component, a data and time and a cost or the like.



特許登録番号 11-139406-3000-998-333218-CORE001	
出願日 1998-05-20	
登録日	2000-11-30
権利種別	実用新案
権利範囲	00000000000000000000000000000000
氏名	田中 宏
代理人	NECホームエレクトロニクス
発明の名称	故障診断装置
発明の内容	本発明は、複数の表示手段1と、各表示手段1の制御信号と電源供給回路の電圧を検出し、該制御信号の品質を評価する機能を有する故障診断装置である。また、該装置は、表示手段1が該装置から即座に連絡を受けない場合、該装置は、該表示手段1が故障したことを維持センター3に連絡する。維持センター3は、該装置が該表示手段1からの連絡を受けない場合、該表示手段1が故障したことを認識し、該表示手段1の修理方法、修理料金、修理時間などを算出し、該装置に該情報を送信する。
請求項	1
摘要	故障診断装置
権利範囲	00000000000000000000000000000000
権利種別	実用新案
権利範囲	00000000000000000000000000000000
氏名	田中 宏
代理人	NECホームエレクトロニクス
発明の名称	故障診断装置
発明の内容	本発明は、複数の表示手段1と、各表示手段1の制御信号と電源供給回路の電圧を検出し、該制御信号の品質を評価する機能を有する故障診断装置である。また、該装置は、表示手段1が該装置から即座に連絡を受けない場合、該装置は、該表示手段1が故障したことを維持センター3に連絡する。維持センター3は、該装置が該表示手段1からの連絡を受けない場合、該表示手段1が故障したことを認識し、該表示手段1の修理方法、修理料金、修理時間などを算出し、該装置に該情報を送信する。
請求項	1

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

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[Date of extinction of right]

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- 3.In the drawings, any words are not translated.

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] The signal circuit which receives the picture signal inputted into the bottom of input power supply, and the picture circuit which processes the picture signal received by this signal circuit, The deflection circuit which deflects the picture signal processed in this picture circuit, and a display means to have the drop which displays the picture signal deflected by this deflection circuit. With the control signal outputted from each circuit of the above-mentioned signal circuit of this display means, a picture circuit, and a deflection circuit The distinction circuit which sends out a notice signal based on the parameter of the fault part memorized beforehand and a failure history from the detector which detects the malfunctioning of each above-mentioned circuit, and the malfunctioning detected by this detector, While the user name beforehand remembered to be the notice signal delivered from this distinction circuit, the address, the telephone number, the purchase stage, a dealer name, and an equipment item number are sent out The fault read-out unit characterized by consisting of a control means equipped with CPU which sends out the time of the above-mentioned malfunctioning, and the Universal Serial Bus which connects the output signal from this CPU to a maintenance center via a network.

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[Translation done.]

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- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

## DETAILED DESCRIPTION

## [Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention is [0002] concerning [ start a fault read-out unit and ] the fault read-out unit of display meanses, such as CRT, especially.

[Description of the Prior Art] As shown in drawing 3, the conventional fault read-out unit consists of CPU123 which shows a distinction result in the display means 101 at the display screen of the detector of picture signal D, a quality distinction circuit, and the drop 11, checks the existence of picture signal D, performs the fault status of picture signal D by the detector, and shows the content of distinction to quality distinction and the drop 11 by CPU123.

[0003]

[Problem(s) to be Solved by the Invention] However, since, as for the conventional fault read-out unit, a failure part except an input picture signal was not recognized by the user by not carrying out a display of the failure of each circuit within a display means only by the input picture signal, although the maintenance center was connected with by oral or FAX, since the exact information according to criteria was seldom transmitted, the user had the technical problem which a management of the content of failure takes great time.

[0004] Then, the purpose of this invention detects the failure of an input picture signal, or the failure of equipment, transmits it to a maintenance center, and is to offer the fault read-out unit from which failure is removed.

[0005]

[Means for Solving the Problem] In order to solve an above-mentioned technical problem, the fault read-out unit of this invention The signal circuit which receives the picture signal inputted into the bottom of input power supply, and the picture circuit which processes the picture signal received by this signal circuit, The deflection circuit which deflects the picture signal processed in this picture circuit, and a display means to have the drop which displays the picture signal deflected by this deflection circuit, With the control signal outputted from each circuit of the above-mentioned signal circuit of this display means, a picture circuit, and a deflection circuit The distinction circuit which sends out a notice signal based on the parameter of the fault part memorized beforehand and a failure history from the detector which detects the malfunctioning of each above-mentioned circuit, and the malfunctioning detected by this detector, While the user name beforehand remembered to be the notice signal delivered from this distinction circuit, the address, the telephone number, the purchase stage, a dealer name, and an equipment item number are sent out It is characterized by consisting of a control means equipped with CPU which sends out the time of the above-mentioned malfunctioning, and the Universal Serial Bus which connects the output signal from this CPU to a maintenance center via a network.

[0006]

[Embodiments of the Invention] Next, the fault read-out unit by the gestalt of 1 operation of this invention is explained with reference to a drawing.

[0007] Drawing 1 is the block block diagram (A) and data output view (B) of the fault read-out unit by the gestalt of 1 operation of this invention.

[0008] Drawing 2 is the detail drawing of the fault read-out unit by the gestalt of 1 operation of this invention.

[0009] The fault read-out unit by the gestalt of 1 operation of this invention As shown in the drawing 1 and the drawing 2, with the control signal outputted from a display means 1 to display picture signal D inputted into the bottom of input power supply, and this display means 1 It consists of a control means 2 to deliver the user name which detects the malfunctioning of the display means 1 and was beforehand remembered to be a notice signal, the address, the telephone number, the purchase stage, a dealer name, and an equipment item number, and to send out the time of a malfunctioning to the maintenance center 3 via a network.

[0010] Moreover, the display means 1 of the fault read-out unit by the gestalt of 1 operation of this invention consists of the signal circuit 13 which receives picture signal D inputted into the bottom of the input power supply 14 as shown in drawing 2, a picture circuit 12 which processes picture signal D which received by this signal circuit 13, a deflection circuit 15 which deflects the picture signal processed in this picture circuit 12, and a drop 11 which displays the picture signal deflected by this deflection circuit 15.

[0011] Furthermore, the control means 2 of the fault read-out unit by the gestalt of 1 operation of this invention As shown in drawing 2, with the control signal outputted from each circuit of a signal circuit 13, the picture circuit 12, and the deflection circuit 15 The distinction circuit 22 which sends out a notice signal based on the parameter of the fault part beforehand memorized by the history store circuit 24 and a failure history from the detector 21 which detects the malfunctioning of each circuit, and the malfunctioning detected by this detector 21, While the user name beforehand remembered to be the notice signal delivered from this distinction circuit 22 by the history store circuit 24, the address, the telephone number, the purchase stage, a dealer name, and an equipment item number are sent out CPU23 which sends out the time of a malfunctioning, and Universal Serial Bus 26 which connects the output signal from this CPU23 to the maintenance center 3 via a network (USB is called below). It has SW27 which controls sending out of the fault part memorized by the history store circuit 24 and a failure history.

[0012] Next, an operation of the fault read-out unit by the gestalt of 1 operation of this invention is explained with reference to a drawing.

[0013] An operation of the fault read-out unit by the gestalt of 1 operation of this invention As shown in the drawing 1 and the drawing 2, detect the voltage of the control signal outputted from each circuit of the signal circuit 13 of the display means 1, the

picture circuit 12, and the deflection circuit 15, and it delivers to a detector 21. An analog wave is digitized by this detector 21, and quality distinction of the part is carried out in the distinction circuit 22, and it delivers and remains in CPU23, and distinguishes whether the failure of the display means 1 or an input signal is poor at a part, and the result is sent out to Light Emitting Diode25 arranged in the front face of the display means 1.

[0014] Therefore, when [ of the display means 1 ] poor, CPU23 is delivered to the history store circuit 24, is memorized, by display of Light Emitting Diode25 of display means 1 front face, when the display means 1 is poor, by USB26, it connects with the maintenance center 3 through a network, and pushes SW27 of the control means 2, and sends out the content of fault. [0015]

[Effect of the Invention] It is effective in the ability for the failure status to grasp correctly and do error processing quickly, in order according to the fault read-out unit of this invention to detect the failure of an input signal, or the failure of equipment, to transmit to a maintenance center and to remove failure, as explained above.

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[Translation done.]

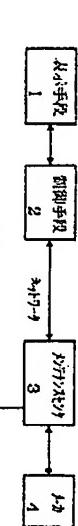


【0012】 次に、本発明の一実施の形態による故障診

ロック構成図(A)及びデータ出力図(B)である。  
【図2】本発明の一実施の形態による故障診断装置の構成

【図1】本発明の一実施の形態による故障診断装置のブロック構成図(A)及びデータ出力図(B)である。

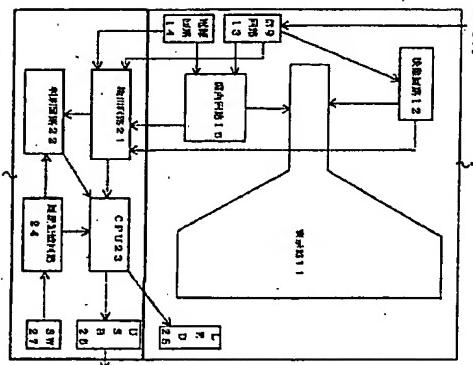
[四]



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裝置名 : ST 21457

製品番号	PPI124043
販売ID	123商公
購入日	平成00年00月00日
出荷日	平成00年00月00日
費用	3000円
	5000円



12

[0.015] **【新規の効果】**以上説明したように、本発明の故障診断装置によれば、入力信号の侵入が装置の障害か否かを検出し、メンテナンスセンターに伝達して障害を除去するため、障害状況が正確に把握でき、かつ障害処理が迅速にできる効果がある。

**【図面の簡略化説明】**

出して残り一部で表示手段1の不良か入力信号の不良かを判別し、その結果を表示手段1の前面に配置されたLED 2 5に送出する。

1001 2 3 は、表示手段1の不良の場合、履歴記憶回路2 4に送出して記憶し、表示手段1前面のLED 2 5の表示によって表示手段1が不良い旨を示す。このとき、表示手段1が不良い場合、USB 2 6により、ネットワークを介してメンテナンスセンター3に接続し、仰角手段2のSW2 7を押して

[0012] 次に、本発明の一実施の形態による故障診断装置の動作を図面を参照して説明する。

[0013] 本発明の一実施の形態による故障診断装置の動作は、図1及び図2に示すように、表示手段1の情報により回路13、検査回路12、候補回路15の各回路から抽出される制御信号を回路12、候補回路15の各回路に差し出し、その後回路21でアラートログ表示をデジタル化にして一部を抑制回路22で表示細部させ、CPU23に差し出

【図1】本発明の一実施の形態による故障診断装置のブロック構成図（A）及びデータ出力図（B）である。  
【図2】本発明の一実施の形態による故障診断装置の詳細図である。  
【図3】従来の故障診断装置のブロック構成図である。  
〔符号の説明〕  
1 表示手段

21	檢出回路
22	判別回路
23	CPU
24	履歷記憶回路
25	LED
26	USB
27	SW

1000

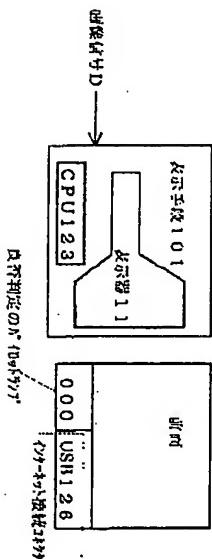
七

塑件名	: S T 2 1 4 5 7
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模具尺寸	400
模具厚度	30
型腔数	30

124043  
3蔵公  
0000001/001  
000年00月00日  
回数  
003  
5

成00年00月  
1・西施  
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三



良否判定のルーブルツ

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-292986  
 (43)Date of publication of application : 05.11.1996

(51)Int.CL

G06F 17/60  
 G06F 11/22  
 G06F 13/00  
 G06F 13/00

(21)Application number : 07-098699  
 (22)Date of filing : 24.04.1995

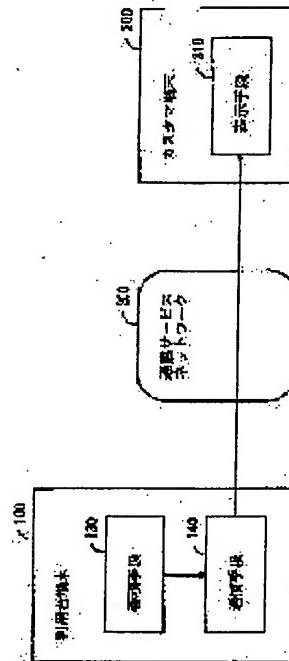
(71)Applicant : NIPPON TELEGR & TELEPH CORP <NTT>  
 (72)Inventor : ITO HARUHISA

## (54) METHOD AND SYSTEM FOR ASSISTING CUSTOMER SUPPORT

## (57)Abstract:

PURPOSE: To provide a customer support assisting method and system which can provide accurate information for an operator of a customer support center from a user.

CONSTITUTION: A user terminal 100 is equipped with a storage means 130 which stores internal state information obtained as the user operates and a communication means 140 which sends the internal state information stored in the storage means 130 to the customer support center 300 in response to access to the customer support center, and the customer support center 300 is equipped with a customer support terminal 310 having a display means 310 which acquires the information received from the user terminal 100 and displays it.



## LEGAL STATUS

[Date of request for examination] 24.01.2000

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

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[Date of extinction of right]

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## CLAIMS

## [Claim(s)]

[Claim 1] In the customer support support technique for this customer support center offering the service corresponding to this access, if a user accesses the customer support center which is a communication entrepreneur side through a network The status information about the status and the environment in the end of a local which are transmitted to the aforementioned user side at the aforementioned customer support center is accumulated. It is the customer support support technique which the aforementioned user delivers the aforementioned status information accumulated considering the access to the aforementioned customer support center as an opportunity to the aforementioned customer support center, and is characterized by the aforementioned customer support center providing an operator with the acquired aforementioned status information.

[Claim 2] The customer support support technique according to claim 1 which accumulates the log information generated for every terminal unit of the aforementioned user and the availability information on the aforementioned terminal, and the message information received from the status information communication service network of the aforementioned terminal as the aforementioned status information.

[Claim 3] The customer support support technique according to claim 1 which accesses the terminal by the side of the aforementioned user at any time, and acquires the maintenance reference information to need from the aforementioned customer support center.

[Claim 4] The aforementioned maintenance reference information is the customer support support technique according to claim 3 containing the message information received from the aforementioned log information and the availability information on the aforementioned terminal, the failure information on the aforementioned terminal, and the communication service network.

[Claim 5] In the customer support aided system which consists of a user terminal which accesses the customer support center which is a communication entrepreneur side and answers this user ignited by the access from a user, and this customer support center A store means to accumulate the status information about the status and the environment in the end of a local which the aforementioned user terminal transmits to the aforementioned customer support center, The means of communications which sends out the aforementioned status information accumulated ignited by the access to the aforementioned customer support center's at the aforementioned store means to the aforementioned customer support center is provided. The aforementioned customer support center is a customer support aided system which acquires the aforementioned status information received from the aforementioned user terminal, and is characterized by providing the customer terminal which has a display means to display.

[Claim 6] The aforementioned store means is a customer support aided system according to claim 5 which accumulates the log information generated as the aforementioned status information whenever it operates the aforementioned user terminal, the availability information on the aforementioned store means itself, the failure information on the aforementioned user terminal, and the message information on a communication service network.

[Claim 7] The aforementioned customer support terminal is a customer support aided system according to claim 5 which has further a user-terminal information acquisition means to access at any time in the aforementioned end of a user side edge, and to acquire the information to need.

[Claim 8] The aforementioned user-terminal information acquisition means is a customer support aided system according to claim 7 which acquires the message information received from the aforementioned log information and the availability information on the aforementioned terminal, the failure information on the aforementioned terminal, and the aforementioned communication service network.

[Translation done.]

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## DETAILED DESCRIPTION

## [Detailed Description of the Invention]

## [0001]

[Field of the Invention] this invention relates to the customer support support technique and a system, and relates to the customer support support technique and the system for supporting the operator of a customer support center who receives the customer who uses a specific terminal especially.

[0002] When failure occurs to a customer's terminal or the operator of a customer support center receives the inquiry from a customer in detail, it is related with the customer support support technique and the system for giving exact designation and an exact explanation to a customer.

## [0003]

[Description of the Prior Art] Conventionally, the information which the user recognizes is used for the information acquired by the customer support center corresponding to the inquiry from a user offered as consistency of a customer support. For example, in the time of failure occurrence etc., the operator of a customer support center asks whether are carrying out what operation to the user and failure occurred, and gets a reply of the status of the terminal at that time, the status of failure, etc. from a user. An operator searches the cause of failure, the restoration technique, etc. based on the information acquired from the user.

[0004] Drawing 10 shows the configuration of the conventional customer support aided system. In the system shown in this drawing, if the customer support center 30 receives from a user 10 that failure occurred, the operator of the customer support center 30 will ask a user 10 the information on the failure status through a telephone or a terminal unit. Thereby, a user 10 transmits the information about the failure status and the operation status to the customer support center 30. Thereby, the customer support center 30 performs analysis for problem analysis based on those acquired informations, and provides a user with the information for restoration.

## [0005]

[Problem(s) to be Solved by the Invention] However, in the above-mentioned conventional system, since the information for which an operator is obtained from a user is restricted to the information which a user can recognize, a user will find out about the information which he does not necessarily remember clearly. Usually, the user remembers clearly neither a failure occurrence cause nor the operation status in many cases at the time of failure occurrence. For this reason, the information which a customer support center acquires may have that it is not [ much ] necessarily exact, and may be an uncertain information. For this reason, in case an operator provides a user with designation of failure restoration based on the information in which it made a mistake by a user's misapprehension etc., the mistaken designation is performed and there is a problem lapse into a still deep failure.

[0006] this invention was made in view of the above-mentioned point, improves the technique of a customer support of the former which can gather information through a user, and aims at offering the customer support support technique and the system which can provide the operator of a customer support center with an exact information from a user.

## [0007]

[Means for Solving the Problem] Drawing 1 is drawing for explaining the principle of this invention. In the customer support support technique for a user accessing this invention through a network at the customer support center which is a communication entrepreneur side, and a customer support center offering the service corresponding to an access The status information about the status and the environment in the end of a local which are transmitted to a user side at a customer support center is accumulated (step 1). A user delivers the status information accumulated ignited by the access to a customer support center (step 2) to a customer support center (step 3), and a customer support center provides an operator with the acquired status information (step 4).

[0008] Moreover, the log information generated for every terminal unit of a user and the availability information on a terminal, and the message information received from the status information communication service network of a terminal are accumulated as status information (step 2). Moreover, at any time, this invention accesses the terminal by the side of a user, and acquires the maintenance reference information to need from a customer support center.

[0009] Maintenance reference information includes the message information received from log information and the availability information on a terminal, the failure information on a terminal, and the communication service network. Drawing 2 is a principle block diagram of this invention. If this invention is a communication entrepreneur side and it is accessed through a network 200 from a user In the customer support aided system which consists of a user terminal 100 which accesses the customer support center 300 which answers a user, and the customer support center 300 A store means 130 to accumulate the status information about the status and the environment in the end of a local which a user terminal 100 transmits to a customer support center, The means of communications 140 which sends out the status information accumulated ignited by the access to a customer support center at the store means 130 to the customer support center 300 is provided. The customer support center 300 acquires the status information received from the user terminal 100, and possesses the customer support terminal 310 which has a display means 310 to display.

[0010] Moreover, the store means 130 accumulates collectively the log information generated whenever it operates a user terminal 100, the availability information on store means 130 the very thing, the failure information on a user terminal, and the message information received from the communication service network 200 as an internal-state information.

[0011] Moreover, the customer support center 300 has further a user-terminal information acquisition means to access a user

terminal 100 and to acquire the information to need, at any time. Moreover, a user-terminal information acquisition means acquires the message information received from the log information of a user terminal 100 and the availability information on a terminal, the failure information on a terminal, and the aforementioned communication service network.

[0012]

[Function] this invention accumulates the operation history information to the terminal side by the side of a user, and in case it accesses a customer support center, it becomes possible [ providing an operator with these informations ] by the customer support center by sending out the operation history information accumulated and a terminal, or the failure information generated with the communication service system collectively. That is, since the operation history information automatically accumulated according to operation and the information showing the status generated within the terminal or the communication service system are transmitted as it is into the terminal by the side of a user and it is not necessary to depend on storage of a user etc., an operator is provided with an exact information.

[0013] Moreover, this invention becomes it is possible to always collect required informations for the information accumulated at the terminal which the user is using, and possible [ cutting down sharply the man day of the information collection at the time of an operator inquiry of a user ]. Furthermore, since this invention can acquire the status information of a terminal required at any time as reference information for a maintenance when performing a fixed maintenance etc., it becomes able [ the customer support center 300 ] to acquire status information from a terminal automatically for every maintenance, as there is no delivery from the customer support center 300.

[0014]

[Example] Hereafter, one example of this invention is explained in detail with a drawing. Drawing 3 shows the configuration of the customer support aided system of one example of this invention. The customer support aided system shown in this drawing consists of a device 100 which a user operates, a communication service network 200 which a communication entrepreneur offers, and a customer support center 300 which a communication entrepreneur owns.

[0015] Drawing 4 shows the configuration of the device of one example of this invention. A device 100 consists of an input unit 110, the output unit 120, memory 130, a communication device 140, and a control unit 150. An input unit 110 and the output unit 120 become the interface at the time of a user operating a device 100. Memory 130 memorizes the internal state of the information which the user created and collected, the operation performed to the input unit 110, and the terminal at that time etc. A communication device 140 receives an information from an access and the customer support center 300 to the customer support center 300. A control unit 150 controls each above-mentioned component.

[0016] If a user operates it to an input unit 110, the log information about the concerned operation and the internal-state information on the terminal of the device at the operation time will be transmitted to memory 130. Memory 130 memorizes the concerned log information and an internal-state information. The information which discriminates the information which discriminates the screen where a device 100 displays an internal-state information on an output unit 120, the message generated at the terminal itself, and the message which received from the communication service network 200 is included. Moreover, the information for accessing a customer support is also memorized by memory 130.

[0017] Drawing 5 shows the configuration of the communication device of the device of one example of this invention. The communication device 140 of a device consists of a telephone circuit 141, a data communication circuit 142, and a transfer device 143. A telephone circuit 141 outputs and inputs an information (voice) by the telephone line, and the data communication circuit 142 transmits and receives data and the access demand which are recorded on memory 130 through the communication service network 200, and the information on the customer service center 300. In performing transmission and reception of a between [ the customer service centers 300 ], it connects with the data communication circuit 142, and the switch equipment 143 changes connection to a telephone circuit 141, when arrival of the mail is detected. In this example, the required information stored in memory 130 shall be transmitted using the data communication circuit 142.

[0018] A control unit 150 detects that it is the communication to the customer support center 300 from the information currently displayed as the input from an input unit 110 on the output unit 120, and controls a communication device 140 to transmit the log information stored in memory 130 to the customer support center 300.

[0019] Drawing 6 shows the configuration of the customer support terminal of one example of this invention. The customer support terminal 310 consists of an input unit 313 which inputs the display 312 and the command which display the communication device 311 which transmits and receives the information on a device 100, the acquired information or the data which should be checked, and a message, and a message.

[0020] Display 312 shall display the log information and the internal-state information which the communication device 311 received from the device 100 to an operator. In this example, if the log information and the internal-state information from a device 100 are received by the communication device 311, the concerned information shall be displayed on display 312.

[0021] Drawing 7 shows the configuration of the communication device of the customer support terminal of one example of this invention. A communication device 311 consists of automatic-answering switch equipment 3111, a telephone circuit 3112, and a data communication circuit 3113. The automatic-answering switch equipment 3111 switches connection to the data communication circuit 3113 while it detects arrival of the mail, when connecting with the telephone circuit 3112. Thereby, the customer support terminal 311 can acquire the information from the device 100 by the side of a user.

[0022] Next, the operation by the above-mentioned configuration is explained. Drawing 8 is a sequence chart which shows an operation of the customer support aided system of one example of this invention.

Step 101 When a user performs an information communication etc. through the telephone line among other terminals (device) by the device 100, the input of a command or a message is performed from an input unit 110.

[0023] Step 102 The memory 130 of a device 100 stores the log information generated based on operation of a user, and the internal-state information on the device at the time. The availability in memory 130 is also updated and held at this time.

Step 103 Suppose that failure occurred in the device 100 here. At this time, a user inputs the access demand to the message and the customer support center 300 which tell the purport which failure generated from the input unit 110.

[0024] Step 104 If a communication device 140 receives the access demand to the customer support center 300, an access demand will be published for the concerned content to the customer support center 300 through the data communication circuit 142.

Step 105 Next, a device 100 reads informations, such as an availability of the log information stored in memory 130, an internal-state information, and memory.

[0025] Step 106 The communication device 140 of a device 100 is sent out to the customer support center 300 through the data communication circuit 142.

Step 107 The communication device 311 of the customer support center 300 receives the information from a device 100, and transmits to display 312.

[0026] Step 108 The display 312 of the customer support center 300 displays the information received from the communication device 311. The operator of the customer support center 300 looks at various kinds of displayed informations, and investigates the cause of fault of searching the cause of fault of a device 100, and the restoration technique.

[0027] Step 109 The operator of the customer support center 300 sends out results of an investigation to a device 100 side through the telephone circuit 3112 or the data communication circuit 3113. Next, the detailed operation by the side of a device 100 is explained.

[0028] Drawing 9 is drawing for explaining an operation of the device of one example of this invention.

Step 201 A user inputs [ keyboard ] a command, a message, etc. from the input unit 110 of a device 100. A user inputs a message etc. with the destination information on a partner's device, when performing data communication etc. to other devices.

[0029] Step 202 A control unit 150 recognizes the destination information on informational that it was inputted by the user, and judges whether they are whether it is the command or message of customer support-center 300 \*\*, a command to other devices, or a message. In being an input to other devices, it shifts to step 203 here, and in being the access demand to the customer support center 300, it shifts to step 205.

[0030] Step 203 As an internal-state information on the device 100 at this time, additional writing is performed for the log information made into an operation history information in memory 130.

Step 204 If the error message has occurred from the communication service network 200, additional writing of the information which specifies the concerned message will be carried out at memory 130.

[0031] Step 205 As a result of storing the above-mentioned internal-state information in memory 130, the availability in memory 130 is updated and the information on the availability of memory 130 which stores in the predetermined field of memory 130 and acquires the following operation history as an availability information (it shifts to step 201) is stored in memory.

[0032] Step 206 In step 202, when it judges that the inputted content is the access demand to the customer support center 300, from memory 130, internal-state informations, such as the operation log information of several predetermined minutes and a message, are read, and it transmits to a communication device 140. For example, at the time of failure, the internal-state information containing the log information for ten affairs is read from the last data. Or internal-state informations, such as a message generated from the communication service network 200 corresponding to the log information in one operation, are read.

[0033] Step 207 The transfer device 143 of a communication device 140 changes connection to the data communication circuit 142.

Step 208 A communication device 140 sends out the data in the memory 130 read at step 206 to the customer support center 300.

[0034] Thereby, the customer support center 300 displays internal-state informations, such as log information which received from the device 100, on the customer support terminal 310. Thus, it is possible to grasp the exact status of a device 100, even if the operator of the direct customer support 300 does not pump out of a user directly the various informations about the log information or the terminal which were stored in the device 100, when a user accesses the customer support center 300.

[0035] In addition, although a user accesses to a customer support center and has transmitted the internal-state information on a device 100 in the above-mentioned example When maintaining a device 100 periodically from a customer support center, a device 100 is accessed from the customer support-center 300 side. If a device 100 detects the access from the customer support center 300, it is also possible to read automatically the internal-state information accumulated from memory 130, and to transmit an internal-state information to the customer support center 300. Thereby, the customer support center 300 should inspect only the device which it is not necessary to go to the place in which the field engineer has actually installed the concerned device about the device judged that is normal, and it is thought that problems, such as failure, occur, or has been generated at the time of a maintenance.

[0036] In addition, what is necessary is just to display the information displayed on the display 312 of the customer support center 300 by the format which an operator tends to discriminate. Moreover, it is also possible to search the failure knowledge base and to display the cause of failure collectively for example, based on the log information acquired from the user, when being asked for the correspondence about failure by the user at the time of a display.

[0037] In addition, change and the application are variously possible for this invention within the patent claim, without being limited to the above-mentioned example.

[0038]

[Effect of the Invention] As mentioned above, since the operation history at the time of operating a device is automatically transmitted to the operator of a customer support according to this invention, in case the operator of a customer support receives with a user, there is a merit that most required informations can be used. On the other hand, from a user side, since the device is collecting automatically the history informations on the terminal handling which he generally does not remember correctly, it is not necessary to report to an operator. Moreover, when receiving usual service of displaying the information on a terminal and seeing, it is not necessary to carry out operation not to need. In a customer support center, since required data are notified in advance, the explanation to a user cannot take time but the effect of a grade which does not need to be said as a customer support for a long time can be acquired.

[Translation done.]



そのため、カスタマサポートセンターが取得する情報は必ずしも正確でないことが多く、不確かな情報である場合が

ある。このため、利用者が該装置によって前述した情報に基づいて、オペレータが該装置等の指向を利用者が操作する際に、誤った指示を行へ、更に深刻な障害に陥る恐れがある。

いう問題がある。  
〔0006〕本発明は、上記の点に鑑みなされたもの  
同時に、利用者端末100にアクセスし、必要とする情報  
を取得する利用者端末側が得手段を更に有する。す

が可能なカスタマサポート支援方針及びシステムを提供することを目的とする。

【課題】解説を解決するための手段1 図1は、本説明の原理を【作用】本説明は、利用者側の監視側において操作履歴情報を蓄積しておき、カスタマーサポートセンターにアクセス

説明するための図である。本説明は、通信事業者側であるカスタマサポートセンターに、ネットワークを介して利  
用を行う際に、監視されている操作履歴情報及び、端末または、通信サービスシステムで発生した障害情報等を

用者がアクセスして、カスタマーサポートセンターがアクセスに対応するサービスを提供するためのカスタマーサポートセンターにより、カスタマーサポートセンターは、これらの情報をオペレータに提供することが可能と併せて送出することにより、カスタマーサポートセンターは、これらの情報をオペレータに提供することが可能と

「アーティストは必ず、利用者が期待において、カタマラサボートせんじに送り出す。」目標達成の状況や環境変化に対する状況情報を見渡す。(ステップ3) 利用者がカタマラセボート

→セントラルへのアクセスを契機として（ステップ2）蓄積されている状態情報をカスタマサポートセンターに送出され、利用者の配信等に悩まなくとも良いため、正確な情報がオペレーターに提供される。

〔0013〕また、本発明は、利用者が使用している状況情報をオペレータに提供する。(ステップ4)。

にアクセスし、必要とするメンテナンス参照情報を取得する。

0014] 末の空き部屋料、端末の貸出料及び通信サービス料が販売することが可能となる。

ストリーリックから受信したメルセーイ情報をお届け。図 2 は、本発明の原理を説いたメルセーイ情報をお届け。図 3 は、本発明の一実施例を詳細に説明する。図 4 は、本発明の一実施例のカスタマーサポートシステムである。

セスされると、利用者が体験するカスタマサポートセンターの運営システムへの接続が、より柔軟で効率的になります。また、システムの構成や操作方法も、従来の電話によるサポートに比べて、より直感的で簡単な操作が可能になります。

る利用者端末100より構成されるカスタマサポート支援システムにおいて、利用者端末100は、カスタマサポートセンターが所有するカスタマサポートセンター00、通信事業者が所有するカスタマサポートセンター00、通信事業者が所有するカスタマサポートセンター00より構成される。

[0015] 図4は、本明の一実施例のデバイスの構成を示す。デバイス100は、入力装置110、出力装置120、CPU130、メモリ140、データ通信部150、音声通信部160、映像通信部170、操作部180、電源部190から構成される。

トセンタへのアクセスを実現として、豊富手段130にて、  
150より構成される。入力装置110と出力装置11  
110により構成される。

セントラ3.00は、利用者端末100から受信した状態情報を取得し、表示する表示手段3.10を有するカス

【0010】また、蓄積手段130は、内部状態情報と  
ダマサポート端末310を具備する。通信装置140は、  
ダマサポート端末310にアクセス及びカスタマイ  
ジング機能を有する。通信装置140は、ダマ  
サポート端末310を記憶する。通信装置140は、  
ダマサポートセンタ300にアクセス及びカスマ  
イジング機能を有する。

1

ポートセントラル3 00より情報を受け取る。通信装置1 5  
0は、上記の各構成要素を抑制する。

[0016] 利用者は、入力装置1 10に対して操作を行つて、当該操作に関するログ情報を、操作時点において  
示される。メモリ1 30にはカスタマサポートによって  
記憶される。内部状態情報は、デバイス1 00が付出裝  
置1 20に表示する画面を識別する情報。端末自身で基  
生したメッセージ、通信サービスネットワーク2 00か  
ら受信したメッセージを識別する情報等が含まれる。ま  
た、メモリ1 30にはカスタマサポートにアクセスする  
ための情報も記憶される。

[0017] 本発明の一実施例のデバイスの通信装置の構成を示す。デバイスの通信装置1 4 20は、電  
話回路1 4 1、データ通信回路1 4 2及び切り替え装置  
1 4 3より構成される。電話回路1 4 1は、電話回線に  
より情報(音声)の入出力を行い、データ通信回路1 4  
2は、通信サービスネットワーク2 00を介してメモリ  
1 30に記録されているデータやアクセス要求や、カス  
タマサービスセンタ3 00への通信を行う機能を有する。電  
話装置1 4 3は、カスタマサービスセンタ3 00との間で  
の送受信を行う場合にはデータ通信回路1 4 2に接続  
し、若者を抽出した場合は電話回路1 4 1に接続を切  
り替える。本実施例では、データ通信回路1 4 2を用いて、メモリ1 30に格納されている必要情報を送信する  
ものとする。

[0018] 朝御装置1 5 0は、入力装置1 10からの入力と、出力装置1 2 0上に表示されている情報をからか  
スマサポーツセンタ3 0 0への通信であることを抽出  
し、メモリ1 30に格納されているログ情報をカスタマ  
サポートセンタ3 0 0に送信するよう通信装置1 4 0を  
制御する。

[0019] 図6は、本発明の一実施例のカスタマサポ  
ート端末の構成を示す。ガスマサポーテンテム1  
は、デバイス1 00との情報の送受信を行う通信装置3  
1 1、取得した情報をまたは、確認すべきデータやメッセ  
ージを表示する表示装置3 1 2及びコマンドメッセージ  
ジを入力する入力装置3 1 3より構成される。

[0020] 表示装置3 1 2は、通信装置3 1 1がデバ  
イス1 00から受信したログ情報や内部状態情報をオペ  
レーターに対して表示するものとする。内部状態では、通  
信装置3 1 1としてデバイス1 00からのログ情報を内部  
状態情報を受信すると、当該情報を表示装置3 1 2に表  
示されるものとする。

[0021] 図7は、本発明の一実施例のカスタマサポ  
ート端末の通信装置の構成を示す。通信装置3 1 1は、  
自動応答切り替え装置3 1 1 1、電話回路3 1 1 2及び  
データ通信回路3 1 1 3により構成される。自動応答  
切り替え装置3 1 1 1は、電話回路3 1 1 2に接続され  
ている時に、若者を抽出すると共にデータ通信回路3 1

1 3に接続を切り換える。これにより、カスタマサポー  
ト端末3 1 1は、利用者の側のデバイス1 00からの情報  
を得得できる。

[0022] 次に、上記の構成による動作を説明する。

[0023] ステップ1 0 2) デバイス1 0 0のメモ  
リ1 3 0は、利用者の操作に基づいて生成されるログ情  
報及びその時点におけるデバイスの内部状態情報を格納  
する。このとき、メモリ1 3 0内の空き容量も更新され  
て保持される。

[0024] ステップ1 0 3) ここでデバイス1 0 0に障害が発生  
したとする。このとき、利用者は入力装置1 1 0より障  
害が発生した旨を伝えるメッセージ及びカスタマサポー  
トセンタ3 0 0に対するアクセス要求を入力する。  
(0024) [ステップ1 0 4) カスタマサポートセン  
タ3 0 0に対するアクセス要求を通信装置1 4 0が受け  
付けたと、当該内容をデータ通信回路1 4 2が介して、  
アクセス要求をカスタマサポートセンタ3 0 0に対して  
発行する。

[ステップ1 0 5) 次に、デバイス1 0 0は、メモリ1  
3 0内に格納されているログ情報、内部状態情報及びメ  
モリの空き容量情報を読み出す。

[ステップ1 0 6) デバイス1 0 0の通信  
装置1 4 0は、データ通信回路1 4 2を介してカスタマ  
サポートセンタ3 0 0に対して送出する。

[ステップ1 0 7) カスタマサポートセンタ3 0 0の通  
信装置3 1 1がデバイス1 0 0からの情報を受信し、要  
示装置3 1 2に転送する。

[ステップ1 0 8) カスタマサポートセン  
タ3 0 0の表示装置3 1 2は、通信装置3 1 1から受け  
取った情報を表示する。カスタマサポートセンタ3 0 0  
のオペレーターは表示された各種の情報を見て、デバイス  
1 0 0の故障原因を検索する等の故障原因及び復旧方  
法を調査する。

[ステップ1 0 9) カスタマサポートセン  
タ3 0 0のオペレーターは、監査結果を電話回路3 1 1 2  
またはデータ通信回路3 1 1 3をしてデバイス1 0 0まで  
まで送出する。次に、デバイス1 0 0側の詳細な動作を  
説明する。

[ステップ1 0 10) 利用者は、デバイス1 0 0の入力裝  
置1 1 0よりコマンドやメッセージ等をキーボード等  
に入力する。利用者は、他のデバイスに対してデータ通  
信を行う場合には、相手のデバイスの宛先情報をと共に

メッセージ等を入力する。

[0029]ステップ202) 制御装置150は、利用者により入力された情報の优先順位を認識して、カスタマサポートセンター300宛のコマンドまたはメッセージに対する入力である場合はステップ203に移行し、カスタマサポートセンター300に対するアクセス要求である場合には、ステップ206に移行する。

[0030]ステップ203) この時点におけるデバイス情報をメモリ130内の内部状態情報をもとに、操作履歴情報をとしてメモリ130に追加登録を行う。メモリ130の内部状態情報をとしてメモリ130の所定領域を格納して、空き容量情報をとしてメモリ130の所定領域に格納して、次の操作履歴を取得する(ステップ206)。

[0031]ステップ205) 上記の内部状態情報をメモリ130に格納した結果、メモリ130内の空き容量を更新して、空き容量情報をとしてメモリ130の所定領域に格納する。当該メッセージを特定する情報をメモリ130に追加登録する。

[0032]ステップ206) ステップ202において、入力された内容がカスタマサポートセンター300に対するアクセス要求であると判断された場合は、メモリ130より所定の部分の操作履歴及びメッセージ等の内部状態情報を読み出し、通信装置140に転送する。例えば、就寝時には、最後のデータから10件分のログ情報を含む内部状態情報を読み出す。または、1回の操作におけるログ情報を対応する通信サービスネットワーク200から発生しているメッセージ等の内部状態情報を読み出す。

[0033]ステップ207) 通信装置140の切り替え装置143は、データ通信回路142に接続を切り替える。

[0034]ステップ208) 通信装置140は、ステップ206で読み出されたメモリ130内のデータをカスタマサポートセンター300に対して送出する。

[0035]なお、上記の実施例では、利用者がカスタマサポートセンター300に対してもアクセスして、デバイス100の内部状態情報を送信しているが、カスタマサポートセンター300から定期的にデバイス100のメンテナンスを行

う場合に、カスタマサポートセンター300側からデバイス100にアクセスして、デバイス100がカスタマサポートセンター300からのアクセスを検知すると、メモリ130より蓄積されている内部状態情報を自動的に読み出して、カスタマサポートセンター300に内部状態情報を送信することも可能である。これにより、カスタマサポートセンター300は、メンテナンス時に、正常であると判定されたデバイスについてフィールドエンジニアが実際に当該デバイスを設置してあるところに由向かなくともよく、障害等の問題が発生すると思われる、またに発生しているデバイスのみを検査すればよい。

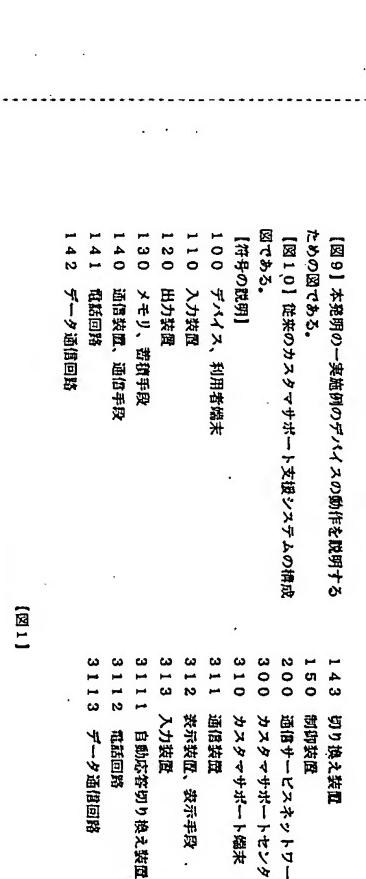
[0036]なお、カスタマサポートセンター300の表示装置312に表示される情報は、オペレータが識別し易いフォーマットで表示されるればよい。また、例えば、表示装置312に複数の対応が利用せらるめられることには、利用者が操作時に基づいて、複数の画面ベースを操作して、障害原因を併せて表示することも可能である。

[0037]なお、本発明は、上記の実施例に限定されることなく、特許請求の範囲内で種々変更・応用が可能である。

[0038]

[発明の効果] 上述のように、本発明によれば、デバイスを操作した際の操作履歴が自動的にカスタマサポートセンター300に蓄積されるため、オペレーターが直接データを送信する必要がない。また、端末の情報を表示させて見えるという通常のサービスを受ける場合には必要としない操作を実現できるというメリットがある。一方、利用者がからは、一般には正確に覚えていない端末操作の履歴情報をデバイスが自動的に収集しているため、オペレーターに報告する必要がない。また、端末の情報を表示させて見るという通常のサービスを受ける場合には必要としない操作を実現する必要がない。カスタマサポートセンターでは、必要なデータが専門に通知されたり、利用者に対する説明に時間がかかるらず、カスタマサポートセンターに付ける必要がない等の効果を得ることができる。

[図面の簡単な説明]



[図1]

[図1] 本発明の原理構成図である。

[図2] 本発明の原理構成図である。

[図3] 本発明の一実施例のカスタマサポート支援システムの構成図である。

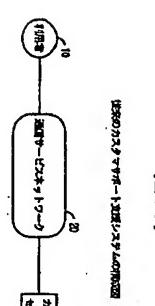
[図4] 本発明の一実施例のデバイスの構成図である。

[図5] 本発明の一実施例のデバイスの通信構成図である。

[図6] 本発明の一実施例のカスタマサポート端末の構成図である。

[図7] 本発明の一実施例のカスタマサポート端末の構成図である。

[図8] 本発明の一実施例のカスタマサポート支援システムの動作を説明するためのシーケンスチャートである。



[図10]

[図2]

[図3]

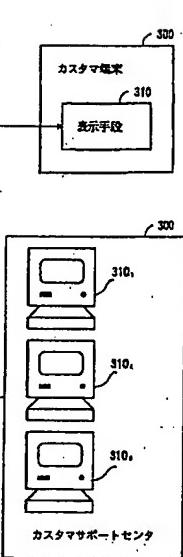
[図6]

[図7]

本発明の実施例のカスタマサポートシステムの構成

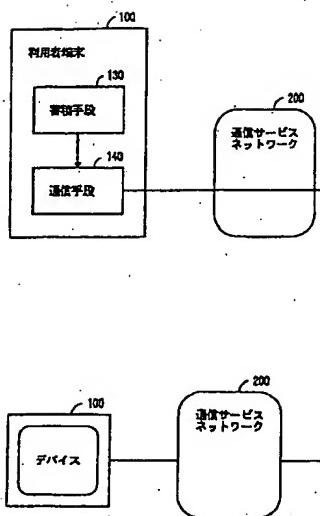
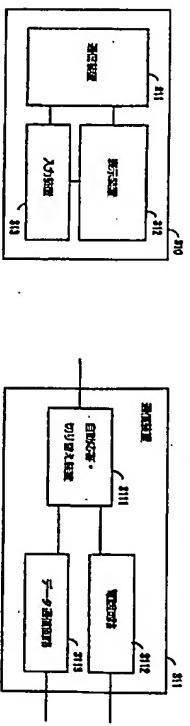
本発明の実施例のデバイスの構成の概要

本発明の実施例のカスタマサポート支援システムの動作を示すシーケンスチャート



[図8]

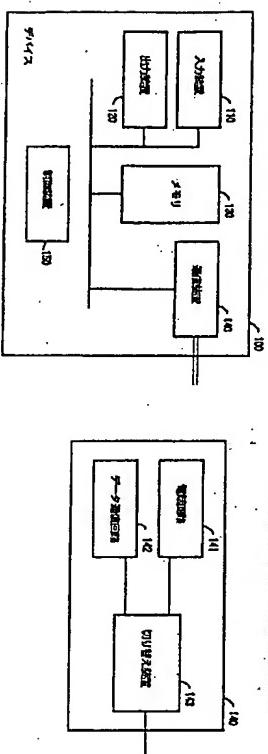
本発明の実施例のカスタマサポート支援システムの動作を示すシーケンスチャート



[図4]

[図5]

本発明の実施例のデバイスの構成の概要



[図9]

本説明の一実施例のデバイスの動作を説明するための図

